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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,386	12/23/2003	Masahiko Matsukawa	21581-00313-US	7939
30678 7590 09/28/2007 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20036			EXAMINER ZHENG, LOIS L	
			ART UNIT 1742	PAPER NUMBER
			MAIL DATE 09/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/743,386	MATSUKAWA ET AL.	
	Examiner	Art Unit	
	Lois Zheng	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10, 13, 14, 20 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 13, 14, 20 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/28/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 28 June 2007 has been entered.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 28 June 2007 was filed after the mailing date of the Notice of Allowance on 22 March 2007. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Allowable Subject Matter

3. Applicant is advised that the Notice of Allowance mailed is vacated. If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claim 23 is rejected under 35 U.S.C. 102(a) as being anticipated by JP 2002-275642(JP'642).

JP'642 teaches a conversion coating solution comprising a titanium compound, a fluoride compound and an aqueous organic high molecular weight compound such as an allylamine resin(abstract, claims 1, 9, paragraph [0067]).

Therefore, JP'642 anticipates instant claim 23.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 10, 13-14, and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over JP'642.

The teachings of JP'642 are discussed in paragraph 3 above.

JP'642 further teaches that hydrogen peroxide is used in combination with the titanium compound in a ratio of 0.1-100 parts by weight to 10 parts by weight and hydrogen peroxide has a concentration of 3-30% by weight with respect to the solid

content(paragraph [0029-0030]). The ratio between the high molecular weight resin in the coating solution of JP'642 and the titanium compound in hydrogen peroxide is 10-2000 parts by weight to 100 parts by weight with respect to solid content(clam 12, paragraph [0082])

Regarding claim 3, based on the ratio between high molecular weight resin and the titanium compound in hydrogen peroxide as taught by JP'642 above and the examples of JP'642, the examiner concludes that the content of the water soluble high molecular weight resin would have overlapped the claimed water soluble resin. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed water soluble resin range from the implicitly disclosed range of JP'642 would have been obvious to one skilled in the art since JP'642 teaches the same utilities in its' disclosed water soluble resin range.

In addition, since JP'642 teaches that the water soluble resin has high molecular weight. Other resins alternative to allylamine are epoxy resin having a molecular weight of 400-4,000(paragraph [0063]) and polyvinyl alcohol resin having a molecular weight of 3,000-100,000(paragraph [0077]). Therefore, one of ordinary skill in the art would have found it obvious to use high molecular weight allylamine that is comparable to other alternatives such as epoxy resin and polyvinyl alcohol resin with expected success. Furthermore, the examiner concludes that the high molecular weight allylamine resin as taught by JP'642 would have implicitly overlap the claimed water-soluble resin molecular weight. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed water soluble resin molecular weight from the

implicitly disclosed range of JP'642 would have been obvious to one skilled in the art since JP'642 teaches the same utilities in its' disclosed water soluble resin molecular weight range.

Regarding claims 4 and 10, the hydrogen peroxide as taught by JP'642 reads on the claimed accelerator. Based on the ratio between hydrogen peroxide and the titanium compound as taught by JP'642 and the examples of JP'642, the examiner concludes that the content of the hydrogen peroxide would have overlapped the claimed peroxide accelerator concentration. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed accelerator concentration range from the implicitly disclosed hydrogen peroxide range of JP'642 would have been obvious to one skilled in the art since JP'642 teaches the same utilities in its' disclosed hydrogen peroxide concentration range.

Regarding claims 5, 13-14 and 20, based on the ratio between hydrogen peroxide and the titanium compound as taught by JP'642 and the examples of JP'642, the examiner concludes that the content of the titanium compound would have overlapped the claimed titanium compound concentration. In addition, JP'642 further teaches that the pH of the coating solution is 1-7(claim 12), which significantly overlaps the claimed pH range of 1.5-6.5. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed titanium concentration and pH ranges from the implicitly disclosed titanium concentration and pH ranges of JP'642 would have been obvious to one skilled in the art since JP'642 teaches the same utilities in its' disclosed titanium concentration and pH ranges.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ

ROY KING
SUPERVISORY PATENT EXAMINER
TELEPHONE 571-272-1700